

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number  
**WO 2005/081722 A3**

(51) International Patent Classification<sup>7</sup>: **B01D 15/00**

(21) International Application Number:  
PCT/US2004/041264

(22) International Filing Date:  
8 December 2004 (08.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10/730,278 9 December 2003 (09.12.2003) US

(71) Applicant (for all designated States except US): **SEPARATION DESIGN GROUP, LLC** [US/US]; 226A Elm Drive, Waynesburg, PA 15370 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **GALBRAITH, Stephen, Douglas** [US/US]; 425 Harkins Road, Holbrook, PA 15341 (US).

(74) Agents: **ZAHER, Alfred, W.** et al.; Woodcock Washburn LLP, One Liberty Place, 46th Floor, Philadelphia, PA 19103 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

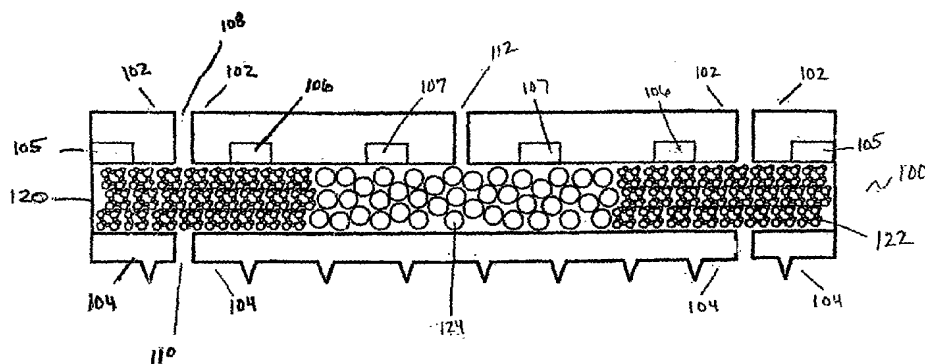
- with international search report
- with amended claims

(88) Date of publication of the international search report:  
5 January 2006

Date of publication of the amended claims: 23 February 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SORPTION METHOD, DEVICE, AND SYSTEM



(57) Abstract: The invention relates to a method of separating components of a fluid mixture comprising the steps of providing a fluid, providing a sorbent structure (120), sorbing a first component of the fluid, desorbing the first component, and electrokinetically biasing the first component in a direction other than the vector of the fluid mixture.

WO 2005/081722 A3